

Estimates of Construction Activity in the United States

THE estimates of construction activity presented in the following tables measure the value of construction work performed, as represented by actual expenditures for labor, material, and other items. They consequently differ from current series for building permits and contract awards, which measure the value of construction work started. They differ further from available current series by attempting to provide comprehensive coverage of all construction work in all parts of the continental United States, whether done on contract or by force account. They include the design, production, and maintenance of fixed works and structures as well as substantial changes in the earth's topography. They include the value and cost of installation of equipment (such as plumbing, heating, and lighting equipment and elevators) which is an integral part of the structure. They do not include factory machinery, power-generating and other movable equipment, shipbuilding, or land costs.

The estimates are compiled by the Bureau of Foreign and Domestic Commerce, on the basis of data from a variety of sources, the most important of which are the F. W. Dodge Corporation, the Bureau of the Census, the Bureau of Labor Statistics, and the Bureau of the Budget. A complete discussion of the sources, concepts, scope, and limitations of the estimates appears in *Construction Activity in the United States, 1915-37*, Domestic Commerce Series No. 99, copies of which may be purchased from the Government Printing Office at a price of 15 cents. Annual figures beginning with 1915, substantially comparable with those presented below, are available in that publication, as supplemented by *Recent Developments in Construction*

Activity, Survey of Current Business, August 1939.

Since the last publication of the complete estimates (in August 1939), various revisions have been made. In many cases, data for 1938 have been revised on the basis of more complete figures from primary sources. In addition, certain changes have been made in the methods of estimate. For factory and commercial construction, the method previously used for securing estimates of expenditures from data on work started has been improved by shortening the average period over which construction is assumed to extend, though the assumption has been continued that expenditures are evenly distributed throughout the period of construction. For commercial buildings, the period has been shortened from 12 to 8 months; for factory building, from 9 to 6 months. These shorter construction periods have been applied in computing the estimates for 1938 and 1939.

For private nonfarm residential building, a somewhat similar method of computation has been used for the years 1937-39. Annual estimates of the value of construction started during each calendar year, based on estimates of the Bureau of Labor Statistics, were distributed by months on the basis of monthly data for building permits. These monthly estimates for work started were then converted to an expenditure basis by assuming that residential work started in any month was done during the following 12 months, with the major part of the work completed in the first 4 or 5 months. In making this distribution four patterns were used, one for work started in each of the four seasons. The same adjustments for under-reporting, lapses, and additions were made as in previous estimates.

Table 1.—Estimated Value of Private and Public Construction, Including New Construction, Maintenance, and Work-Relief Construction¹

(Billions of Dollars)

Items	1923	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939 ²
New construction, total	10,923	10,948	10,552	10,204	8,718	6,289	3,553	2,267	2,001	3,036	4,705	5,479	5,189	6,089
Private	8,810	8,489	8,150	7,839	6,041	3,713	1,787	1,031	1,252	1,905	2,551	2,443	2,072	2,491
Public, total	2,113	2,459	2,402	2,365	2,677	2,576	1,766	1,236	1,450	1,425	2,154	2,927	2,117	2,598
Nonfederal	1,945	2,187	2,286	2,136	2,469	2,156	1,334	707	709	816	1,841	1,858	1,163	1,362
Federal	168	271	116	229	208	420	432	529	696	613	313	1,069	1,014	1,236
Work-relief, Federal (public) ³								114	575	405	1,130	775	1,202	1,032
Maintenance, total	2,799	2,533	2,998	3,112	3,011	2,329	1,752	1,548	1,793	2,063	2,452	2,679	2,662	2,557
Private	2,107	2,175	2,200	2,295	2,140	1,583	1,129	1,016	1,194	1,413	1,742	1,854	1,783	1,830
Public, total	692	758	798	816	871	746	623	532	599	650	710	825	879	727
Nonfederal	647	710	746	705	819	728	581	485	543	598	654	705	779	634
Federal	45	48	52	111	52	118	42	47	56	52	56	120	100	93
Total construction	13,722	13,481	13,550	13,320	11,729	8,618	5,305	3,804	3,794	5,099	7,157	8,158	7,391	8,646
Private	10,917	10,664	10,350	10,134	8,181	5,296	2,916	2,047	2,446	3,318	4,293	4,297	3,855	4,321
Public, total	2,805	2,817	3,200	3,186	3,548	3,322	2,389	1,757	2,348	2,473	2,864	3,861	3,536	4,325
Nonfederal	2,652	2,907	3,014	2,841	3,268	2,934	1,915	1,182	1,947	2,205	2,655	3,778	3,283	4,325
Federal	153	210	186	345	280	388	474	575	401	268	209	1,083	1,253	1,000

¹ Comparable data beginning with 1915 are available in "Construction Activity in the United States, 1915-37," Domestic Commerce Series No. 99, published by the Bureau of Foreign and Domestic Commerce.

² Revised.

³ The distinction between nonfederal and Federal construction is made on the basis of the ultimate source of funds for the work. See table 2.

⁴ Work-relief not elsewhere included. See table 3.

Table 2.—Estimated Value of New Construction, by Principal Uses or Functions of Projects¹

(Millions of dollars)							
Items	1920-29, average	1932	1933	1934	1937	1938	1939 ²
New private construction:							
Residential (nonfarm).....	4,086	541	514	1,101	1,630	1,515	1,380
Commercial.....	1,127	283	135	205	380	311	319
Factory.....	616	78	128	225	701	192	200
Religious and memorial.....	180	40	26	32	42	48	40
Educational.....	117	49	17	51	49	40	44
Social and recreational.....	255	64	37	48	59	53	58
Hospital and institutional.....	107	32	10	30	27	34	38
Miscellaneous.....	20	20	20	21	17	28	40
Total nonresidential building.....	2,496	561	357	674	1,002	730	795
Deduct nonresidential building by utilities.....	73	22	10	18	20	24	25
Total private nonresidential building.....	2,423	539	347	656	982	706	770
Farm construction (includes repairs).....	468	125	176	328	300	1,345	310
Railroad transportation.....	474	130	94	140	189	119	137
Street railways and subways.....	75	20	21	45	30	41	54
Pipe line transportation.....	98	37	7	41	57	31	35
Light and power production and distribution.....	376	121	43	108	162	123	100
Gas production and distribution.....	170	40	30	54	53	45	(*)
Telephone and telegraph communication.....	254	80	45	67	105	92	90
Total public utility construction.....	1,415	402	215	454	620	500	631
Total new private construction.....	3,838	1,767	1,001	2,561	3,642	3,072	3,491
New public construction:							
Highway.....	1,157	916	675	376	1,500	900	950
Sewage disposal.....	157	43	31	115	100	89	125
Water supply.....	189	37	47	58	79	60	120
Public buildings.....	89	178	90	129	112	126	178
Educational.....	303	133	49	287	225	273	290
Hospital and institutional.....	90	76	35	61	68	79	101
Social and recreational.....	45	29	13	49	40	40	42
Total nonresidential building.....	620	463	191	521	440	518	712
Residential.....	14	34	35	81	93	134	81
Military and naval.....	71	139	169	339	300	1,293	224
Conservation and development.....	163	145	61	115	117	116	125
Miscellaneous public service enterprises.....	7	8	4	7	30	15	20
All other Federal.....	7	8	4	7	30	15	20
Total new public construction.....	2,339	1,791	1,210	2,164	3,027	2,117	2,506
Total new construction.....	6,177	3,558	2,211	4,725	6,669	5,189	6,007

¹ Comparable data beginning with 1915 are available in "Construction Activity in the United States, 1915-37," Domestic Commerce Series No. 99, supplemented by "Recent Developments in Construction Activity," Survey of Current Business, August 1939, both published by the Bureau of Foreign and Domestic Commerce.

² Revised.

³ Excludes all public utility construction.

⁴ Does not include labor performed by farm operators (owners or tenants) and regularly employed farm laborers.

⁵ Not available.

⁶ Private ownership only. Includes nonresidential building by utilities.

⁷ Includes an estimate for gas production and distribution.

⁸ Excludes most work-relief construction. See table 5.

Footnotes for Table 3

¹ Includes estimated construction expenditures of the Civil Works Administration, the Federal Emergency Relief Administration, the Works Progress Administration, the Work Projects Administration, and the Civilian Conservation Corps. Includes both new work and maintenance. Excludes expenditures for educational, professional, and medical projects and other projects not considered to involve construction. For a fuller explanation, and for comparable figures for 1934 and 1935, see tables 53 and 54, Domestic Commerce Series No. 99, "Construction Activity in the United States, 1915-37," published by the Bureau of Foreign and Domestic Commerce.

² The figures here presented for several of the categories have been reduced below those appearing in the Treasury Department reports. This reduction has been made to avoid double counting for certain construction which is included in table 2 and to omit items that are not considered to be construction. The categories concerned, and the proportion of the total base included, are as follows: public buildings, one-half; housing, one-half; public recreational facilities, one-third.

³ Estimated amounts of work-relief construction included in the data for nonresidential building contracts awarded, as reported by the F. W. Dodge Corporation, which are used as the basis for the estimates of new nonresidential building in table 2. Work-relief construction included in table 2 cannot be separated from the totals there shown and a distribution of this work by type is not available.

Table 3.—Estimated Value of New Public Construction, by Ultimate Source of Funds and by Ownership¹

(Millions of dollars)							
Items	1920-29, average	1932	1933	1934	1937	1938	1939 ²
I. Ultimate source of funds:							
Total public funds.....	2,339	1,791	1,210	2,164	3,027	2,117	2,506
Nonfederal funds.....	2,140	1,534	1,004	1,881	2,838	1,903	2,302
Federal funds, total.....	190	257	206	283	189	214	204
Federal projects.....	103	253	213	301	323	475	503
Federal aid to highways.....	57	177	165	288	280	219	193
PWA grants.....	—	—	—	321	238	192	430
Work-relief included in table 2.....	—	—	—	190	120	135	110
II. Ownership:							
Total public ownership.....	2,330	1,791	1,210	2,151	3,027	2,117	2,506
Nonfederal ownership, total.....	2,232	1,511	1,004	1,873	2,838	1,903	2,302
Municipal.....	1,281	961	701	1,271	1,628	1,220	1,497
State and county.....	951	550	303	602	877	683	805
Federal ownership.....	107	280	206	326	189	214	204

¹ Comparable data beginning with 1915 are available in "Construction Activity in the United States, 1915-37," Domestic Commerce Series No. 99, supplemented by "Recent Developments in Construction Activity," Survey of Current Business, August 1939, both published by the Bureau of Foreign and Domestic Commerce. Data exclude most work-relief construction. See table 5.

² Revised.

³ Federal funds include expenditures for Federal projects and Federal grants (but not Federal loans) to States and localities for construction purposes. Nonfederal funds include amounts raised by States and localities (from current taxation and from borrowings (whether from private investors or from the Federal Government)).

Table 4.—Estimated Expenditures for the Maintenance of Fixed Works and Structures¹

(Millions of dollars)							
Items	1920-29, average	1932	1933	1934	1937	1938	1939 ²
Railroads.....	691	200	332	457	501	437	475
Street railways.....	101	82	47	72	63	59	68
Light and power.....	38	46	48	50	63	53	65
Telephones and telegraph.....	84	90	66	67	68	70	70
Pipe lines.....	0	0	0	10	13	14	13
Gas.....	20	16	17	21	20	21	20
Highways.....	243	446	378	488	487	500	500
Rivers and harbors.....	30	34	34	39	41	43	41
Water supply and sewage disposal.....	71	78	63	73	80	78	85
Buildings, residential and nonresidential.....	1,189	698	670	1,170	1,240	1,226	1,236
Total.....	2,960	1,752	1,843	2,452	2,579	2,502	2,507

¹ Comparable data beginning with 1915 are available in "Construction Activity in the United States, 1915-37," Domestic Commerce Series No. 99, supplemented by "Recent Developments in Construction Activity," Survey of Current Business, August 1939, both published by the Bureau of Foreign and Domestic Commerce. Excludes work-relief construction.

² Revised.

Table 5.—Estimated Work-Relief Expenditures for Construction Purposes¹

(Millions of dollars)					
Item	1933	1934	1937	1938	1939
Construction not included in table 2:					
Highways, roads, streets, etc.....	57	628	460	806	673
Public buildings.....	16	85	85	76	71
Housing.....	2	2	1	3	1
Public recreational facilities.....	2	94	46	33	43
Irrigation and water conservation.....	—	72	22	49	41
Electric utilities.....	—	4	4	4	8
Water supply.....	—	41	25	45	43
Sewage systems.....	20	123	85	122	119
Transportation facilities.....	—	50	34	60	58
Miscellaneous.....	4	—	—	—	—
Total.....	114	1,180	775	1,323	1,032
Construction included in table 2:					
Total work-relief construction.....	114	1,290	905	1,357	1,142

See opposite column for footnotes.